

EXHIBIT AA

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ELECTRONICALLY

FILED

Superior Court of California,
County of San Francisco

DEC 05 2013

Clerk of the Court

BY: JUDITH NUNEZ

Deputy Clerk

12 SUPERIOR COURT OF THE STATE OF CALIFORNIA

13 COUNTY OF SAN FRANCISCO

15 **THE PEOPLE OF THE STATE OF**
16 **CALIFORNIA, et al.,**

17 Plaintiffs,

18 v.

19 **SAMSUNG SDI, CO., LTD., et al.,**

20 Defendants.

Case No. CGC-11-515784

**CORRECTED DECLARATION OF
WILLIAM S. COMANOR IN SUPPORT
OF PLAINTIFFS' OPPOSITION TO
BMCC's MOTION TO QUASH SERVICE
OF SUMMONS**

Date: December 17, 2013

Time: 9 a.m.

Dept: 304

Judge: Hon. Curtis E.A. Karnow

Trial Date:

Action Filed: November 8, 2011

23 **REDACTED VERSION**

27 SF2011203501

1 I, William S. Comanor, declare and state as follows:

2
3 **Qualifications**

4 I am an economist and Professor of Economics at the University of California, Santa
5 Barbara (UCSB). I am also Professor of Health Policy and Management in the School of Public
6 Health at the University of California, Los Angeles (UCLA). At UCSB, I have regularly taught a
7 course in Antitrust Economics.
8

9 I joined the University of California faculty in 1975. From 1978 to 1980, on leave from
10 my faculty position, I was Director of the Bureau of Economics at the Federal Trade Commission
11 in Washington, D.C. In that capacity, I supervised a staff of over 200 government employees,
12 including more than 85 economists. This staff was responsible for providing economic support
13 for all Commission activities as well as for carrying out economic research activities that dealt
14 with competition and consumer protection issues.
15

16 Prior to 1975, I was Assistant and Associate Professor of Economics at Harvard and
17 Stanford Universities. I also served as Professor of Economics for a year in Canada at the
18 University of Western Ontario, and was Fulbright Lecturer in Economics at the University of
19 Tokyo. In 1964, I received my Ph.D. in economics from Harvard University; and in 1965 and
20 1966 served as Special Economic Assistant to the Assistant Attorney General in charge of the
21 Antitrust Division of the United States Department of Justice.
22

23 In April 2003, I received the Distinguished Fellow Award from the Industrial
24 Organization Society. That award is given annually in recognition of excellence in Research,
25 Education and Professional Leadership in the field of Industrial Organization. My work on
26 Antitrust Economics lies within that field of study.
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1 During my professional career, I have studied, lectured, written, and consulted on many
 2 issues dealing with the antitrust economics. A more detailed statement of my professional and
 3 educational background, including a list of publications, is attached as Appendix A. A listing of
 4 other cases in which I testified as an expert at trial or by deposition within the past four years is
 5 also attached as Appendix B. My compensation for both analysis and testimony in this matter is
 6 paid at the rate of \$700 per hour.

8 I was also retained by the attorneys for the Indirect Purchaser Plaintiffs in the Flat Panel
 9 Antitrust Litigation and provided antitrust analyses and damage estimates in that case. I
 10 submitted reports on the LCD industry, the cartel, overcharges, pass-through rates and damages in
 11 that matter, and also sat for two depositions. I am also currently conducting an antitrust analysis,
 12 preparing estimates of damages, and writing a report in *State of California, et al., v. Samsung SDI*
 13 *Company, Ltd., et al.*

14 Assignment

15 I have been asked by attorneys in the Office of the Attorney General of California to
 16 provide economic data and analysis demonstrating there is a strong probability that some CRT
 17 tubes produced by Beijing Matsushita Color CRT Company, Ltd. (BMCC) were incorporated into
 18 finished products that were sold in California. More generally, I have been asked to investigate
 19 whether there are economic activities linking BMCC to California during the relevant period:
 20 1995 to 2007.

21 Background of BMCC

22 Beijing-Matsushita Color CRT Company is a Chinese company located in Beijing,
 23 People's Republic of China. It is a joint venture, 50 percent owned by MTPD¹ and 50 percent

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 27 ¹ BMCC was founded as a joint venture between several Chinese investors and the predecessor to
 28 Panasonic, Matsushita Electric Industrial Company. When Matsushita and Toshiba formed the MTPD joint venture it
 assumed Matsushita's 50 percent ownership in BMCC.

1 owned by Beijing Orient Electronics, China National Electronics Import & Export Company, and
 2 Beijing Yayunchun Branch of the Industrial and Commercial Bank of China.² The company
 3 began making CRTs prior to the advent of the CRT price fixing cartels. It produced CRT monitor
 4 tubes through 1999, when it ceased making those tubes, but continued to make CRT television
 5 tubes until it ceased CRT operations in 2009.³

7 A MTPD employee, Mr. Ayumu Kinoshita, assigned to BMCC submitted a declaration in
 8 which he describes BMCC's CRT tube manufacturing and sales.⁴ Specifically, he testified that
 9 while the majority of the CRTs manufactured by BMCC during the cartel period were sold and
 10 shipped to customers located in China, he also stated that, "certain Panasonic entities purchased a
 11 limited amount of CPTs (i.e., CRT television tubes) from BMCC FOB China, which CPTs the
 12 Panasonic entities sold in the United States."⁵

14 Economic Issues

15 In its *Memorandum in Support of Motion to Quash Service of Summons*, BMCC asserts
 16 that it did not sell CPTs (i.e., CRT tubes used in televisions) into the United States or "control...
 17 the prices at which they were sold there."⁶ The first part of this assertion is false. As I discuss in
 18 the next section, sales data provided by MTPD show that BMCC did in fact sell CRTs into the
 19 United States. Since CRT tubes of a given size and regional configuration are interchangeable,⁷ it
 20 is also likely that BMCC's CRT tubes sold into the United States could also have been sold in
 21 California as well as in other states.

23 ² *The State of California et al. v. Samsung SDI, et al.*, Complaint, p. 11.

24 ³ *State of California v. Samsung SDI, et al.*, Beijing Matsushita Color CRT Co., Ltd's Memorandum in
 25 Support of Motion to Quash Service of Summons, p. 1.

26 ⁴ *State of California v. Samsung SDI, et al.*, Declaration of Ayumu Kinoshita in Support of Beijing
 Matsushita Color CRT Co., Ltd's Motion to Quash Service of Summons.

27 ⁵ *Ibid.*, p. 4.

28 ⁶ Beijing Matsushita Color CRT Co., Ltd's Memorandum in Support of Motion to Quash Service of
 Summons, p. 6.

⁷ See Deposition of Chin Chun Liu (an executive of Chunghwa Picture Tubes Limited, Volume II, pp. 299-
 300.

Furthermore, the second part of BMCC's assertion, indicating it did not control the prices at which CRTs were sold in the United States, is questionable. According to notes from various cartel meetings, BMCC representatives participated in the CRT price fixing cartel.⁸ Representatives from its joint venture parent, Matsushita-Toshiba Picture Display (MTPD), attended numerous meetings during the cartel period. This cartel succeeded in elevating CRT prices. Through its involvement in an effective cartel, BMCC increased the prices of its CRT tubes above levels that would have been charged absent the cartel. As a matter of economics, higher tube prices resulting from the cartel would then be passed on through various stages in the distribution system (e.g., from BMCC to television assembler to wholesaler to retailer and then to natural person end users). Higher tube prices would then lead directly to higher prices for TVs containing BMCC CRT TV tubes.

Empirical Evidence of BMCC's Sales of CRTs into the United States and California

On April 22, 2011, as part of the discovery process in the *Cathode Ray Tube (CRT) Antitrust Litigation*, Panasonic produced a database that included information on global sales of CRTs produced by Panasonic affiliated companies from 1994 to 2007.⁹ This database includes monthly summaries of transactions between MTPD factories and customers, by type of CRT, tube size, quantity, along with the value in dollars of tubes sold to a given customer in a given month. It contains information on the factory where the CRT tubes were manufactured, and BMCC is listed as one such factory. Additional information includes the country in which the manufacturing facility was located and the country in which a tube's purchaser was located. The United States and Mexico are options in this database field. The data contained in this database

⁸ For evidence of BMCC's attendance and participation at cartel meetings, see CHU00030684, CHU00030745, CHU00030819, and SDCRT-0086672.

⁹ See letter from Adam C. Hemlock of Weil, Gotshal & Manges, LLP to Paul H. McVoy at Milberg, LLP. Paragraph 1. The database is MTPD-0122906.xls

1 can then be used to estimate the flow of CRTs from factory location to the tube purchaser's
2 country.

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13 My work is ongoing and I have not yet identified the number of CRT TVs purchased by
14 natural persons in California. However, one can estimate the number of BMCC's CRT tubes that
15 were incorporated into TVs and then sold in California. CRT TVs are considered normal goods,
16 which means that natural persons with higher incomes would tend to purchase more CRT TVs
17 than otherwise identical persons with lower incomes. As a result, states with higher income
18 consumers would be expected to account for relatively more purchases of CRT TVs. Therefore, a
19 conservative estimate of the proportion of BMCC's tubes embodied in CRT TVs sets that were
20 sold in the United States and purchased by natural persons in California can be made on the basis
21 of California's gross state product relative to United States gross domestic product.¹¹ Using gross
22 state product and gross domestic product data as published by the U. S. Department of
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27 Gross state product is the value of all goods and services produced in a particular state in a particular
28 year, whereas gross domestic product is the value of all goods and services produced in the United States during a particular year.

1 Commerce,¹² I find that California accounted for approximately 13.2 percent of total income in
 2 the United States between 1995 and 2007. On that basis, I estimate that approximately 160,275
 3 CRTs manufactured by BMCC, worth approximately \$10.7 million, were sold to natural persons
 4 in California from 1995 to 2007 in CRT containing products.

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 6 I have also analyzed BMCC's sales of CRTs to purchasers located in Mexico. During the
 7 relevant period, it sold approximately 2.6 million tubes, or 3.1 percent of its aggregate unit sales,
 8 to purchasers located there. The value of these tube sales was approximately \$99.4 million.
 9 Apparently, BMCC sold more tubes to purchasers located in Mexico than in the United States.
 10 However, these sales are relevant to the question at hand because many TV assembly plants that
 11 supplied the United States and California with finished products containing CRTs were situated in
 12 northern Mexico in locations immediately south of the US-Mexico border.
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 17 Martin Kenney, a researcher at the University of California, Davis describes this shift: "television
 18 assembly in North America shifted to Mexico while imports from Asia continue to decline ... In
 19 1997, North American television demand was for 27.2 million units; of these 21.4 million were
 20 produced in Mexico."¹⁴ As further noted by Kenney, 20 percent of the world's television sets
 21 were assembled in Mexico in 1997.¹⁵
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24 ¹² The underlying data are available at <http://www.bea.gov/regional/downloadzip.cfm>.

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 27 ¹⁴ Martin Kenney, The Shifting Value Chain: The Television Industry in North America," in Martin Kenney
 and Richard Florida, eds., *Locating Global Advantage: Industry Dynamics in the International Economy* (Stanford:
 Stanford University Press), 2004, pp. 95-96.

28 ¹⁵ *Ibid.*, p. 107.

1 The extent to which these factories supplied televisions to the United States can be
 2 estimated from Banco Nacional de Comercio Exterior ("Bancomext"—a Mexican state-owned
 3 bank and export credit agency) data showing the sources of manufacture and consumption of
 4 televisions within NAFTA in 1998. According to the Bank's data, Mexico produced 26.4 million
 5 television sets in 1998, or approximately 98.5 percent of all televisions produced within NAFTA.
 6 Mexican consumers, however, purchased only 1.6 million sets that year. Since each TV requires
 7 a television tube,¹⁶ nearly 95 percent of all TV sets produced in Mexico were exported. Moreover,
 8 the United States was the largest consumer of Mexico-assembled televisions. One estimate is that
 9 sales in the United States accounted for 90 percent of Mexico's television production in 2000.¹⁷
 10 In that case, 90 percent of the 2.6 million CRTs that BMCC sold to purchasers located in Mexico,
 11 or 2.3 million tubes, were assembled into TV sets that were then sold in the United States. The
 12 value of BMCC's CRT tubes that flowed through Mexico to the United States could then be
 13 valued at approximately \$89.5 million. Some of these finished televisions were surely sold in
 14 California. Using the estimates of California's share of CRT TV consumption in the United States
 15 of 13.2 percent, an additional 308,900 CRT tubes worth \$11.81 million, were likely sold to
 16 natural persons in California during the cartel period.

17 Conclusions

18 BMCC left a large economic footprint in the market for CRT TVs sold in California.

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 24 These tubes were assembled into finished CRT televisions. Those

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 27 ¹⁶ According to Fuji Chimera Research Institute, *Flat Panel Displays and Their Applications: Forecasts and Trends*, CRT TVs accounted for over 99 percent of all televisions sold worldwide in 1998.

28 ¹⁷ Jorge Carrillo, "Foreign Direct Investment and Local Linkages: The Case of the Mexican Television Industry in Tijuana," *Research in the Sociology of Work*, vol. 13 (2003), p. 107.

1 finished goods were then sold to retailers who in turn sold many of them to natural persons in
2 California. [REDACTED]
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8 I declare under penalty of perjury under the laws of the State of California that the
9 foregoing is true and correct. Executed on this 2nd day of December 2013 in Los Angeles,
10 California.
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14 William S. Comanor
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APPENDIX A

Curriculum Vitae

NAME William S. Comanor

ADDRESS Department of Economics
University of California
Santa Barbara, CA 93106
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DATE OF BIRTH May 11, 1937

BIRTHPLACE Philadelphia, Pennsylvania

EDUCATION 1951-1955 Central High School, Philadelphia, PA
1955-1957 Williams College, Williamstown, MA
1957-1959 Haverford College, Haverford, PA
A.B. in Economics
1959-1963 Harvard University, Cambridge, MA
Ph.D. in Economics
1963-1964 London School of Economics,
London, England

THESIS TITLE The Economics of Research and Development in
the Pharmaceutical Industry

FIELDS OF INTEREST Applied Microeconomics
Industrial Organization and Public Policy

PROFESSIONAL
OFFICES Vice President, Industrial Organization
Society, 1990
President, Industrial Organization Society,
1991

AWARD Distinguished Fellow Award, Industrial
Organization Society, 2003

BOARD OF EDITORS Review of Industrial Organization
Antitrust Bulletin
Journal of Industrial Economics
International Journal of Advertising

Professional Experience

Teaching Fellow, Harvard University, 1961-1963.

Instructor in Economics, Harvard University, 1964-1965.

Special Economic Assistant to the Assistant Attorney General, Antitrust Division, U.S. Department of Justice, 1965-1966.

Assistant Professor of Economics, Harvard University, 1966-1968.

Associate Professor of Economics, Graduate School of Business, Stanford University, 1968-1973.

Fulbright Visiting Lecturer, University of Tokyo, 1972.

Visiting Associate Professor of Economics, Harvard University, 1973-1974.

Professor of Economics, University of Western Ontario, 1974-1975.

Director, Bureau of Economics, Federal Trade Commission, 1978-1980.

Professor of Economics, University of California, Santa Barbara, 1975-

Chairman, Department of Economics, University of California, Santa Barbara, 1984-1987.

Visiting Professor of Law, University of California, Los Angeles, 1988-90.

Visiting Professor of Public Health, University of California, Los Angeles, 1990-93

Professor, Department of Health Policy and Management, Fielding School of Public Health, University of California, Los Angeles, 1993-

Books and Monographs

Advertising and Market Power, Harvard University Press, 1974 (with Thomas A. Wilson).

National Health Insurance in Ontario: The Effects of a Policy of Cost Control, American Enterprise Institute, 1980.

Competition Policy in Europe and North America: Economic Issues and Institutions, Harwood Academic Publishers, 1990.

Competition Policy in the Global Economy, Routledge Press, 1997 (with Leonard Waverman and Akira Goto).

The Law and Economics of Child Support Payments, Edward Elgar Publishers, 2004.

Pharmaceutical Economics, Edward Elgar Publishers, forthcoming (with Stuart O. Schweitzer).

Articles

"Research and Competitive Product Differentiation in the Pharmaceutical Industry in the United States," Economica, November 1964.

Reprinted in Hearings before the Subcommittee on Monopoly of the Select Committee on Small Business, United States Senate, 90th Congress, Part 5, 1967-68.

"Research and Technical Change in the Pharmaceutical Industry," Review of Economics and Statistics, May 1965.

Reprinted in Hearings before the Subcommittee on Monopoly of the Select Committee on Small Business, United States Senate, 90th Congress, Part 5, 1967-68.

Also reprinted in translation in Jen Naumann, Forschungsökonomie und Forschungspolitik, 1970.

"The Drug Industry and Medical Research: The Economics of the Kefauver Committee Investigation," Journal of Business, January 1966.

Reprinted in Hearings before the Subcommittee on Monopoly of the Select Committee on Small Business, United States Senate, 90th Congress, Pat 5, 1967-68.

Also reprinted in translation in Mercurio, Febbraio 1967.

"Competition and the Performance of the Midwestern Coal Industry," Journal of Industrial Economics, July 1966.

"Vertical Mergers, Market Power, and the Antitrust Laws," American Economic Review, May 1967.

Reprinted in The Journal of Reprints of Antitrust Law and Economics, Vol. V, Fall 1973.

Also reprinted in Jeffrey A. Krug, Corporate Strategy, Sage Publications, Vol. 2, 2009.

"Advertising Market Structure and Performance," Review of Economics and Statistics, November 1967 (with Thomas A. Wilson).

Reprinted in Hearings before the Subcommittee on Monopoly of the Select Committee on Small Business, United States Senate, 90th Congress, Part 5, 1967-68.

Also reprinted in Douglas Needham, Readings in the Economics of Industrial Organization, 1970.

Also reprinted in The Journal of Reprints of Antitrust Law and Economics, Vol. IV, Summer 1972.

Also reprinted in B.S. Yamey, Economics of Industrial Structure, 1973.

Also reprinted in The Journal of Reprints of Antitrust Law and Economics, Vol. XIV, 1983.

"Market Structure, Product Differentiation, and Industrial Research," Quarterly Journal of Economics, November 1967.

"Vertical Customer and Territorial Restrictions: White Motor and Its Aftermath," Harvard Law Review, May 1968.

Reprinted in Hearings before the Subcommittee on Antitrust and Monopoly, Committee on the Judiciary, United States Senate, 92nd Congress, 1972.

"Advertising and the Advantage of Size," American Economic Review, May 1969 (with Thomas A. Wilson).

"Patent Statistics as a Measure of Technical Change," Journal of Political Economy, May-June 1969 (with F.M. Scherer).

"Allocative Efficiency, X-Efficiency, and the Measurement of Welfare Losses," Economica, August 1969 (with Harvey Leibenstein).

Reprinted in C.K. Royley, Readings in Industrial Economics, Vol. 2, 1972.

Also reprinted in Richard E. Neel, Readings in Price Theory, 1973.

Also reprinted in William G. Shepherd, Public Policies Towards Business: Readings and Cases, 1975.

"Should Natural Monopolies be Regulated?" Stanford Law Review, February 1970.

"Cable Television and the Impact of Regulation," Bell Journal of Economics and Management Science, Spring 1971 (with Bridger M. Mitchell).

"Quantitative Studies in Industrial Organization: A Comment," M.D. Intriligator, ed., Frontiers of Quantitative Economics, North Holland, 1971.

"On Advertising and Profitability," Review of Economics and Statistics, November 1971 (with Thomas A. Wilson).

"The Cost of Planning: The FCC and Cable Television," Journal of Law and Economics, April 1972 (with Bridger M. Mitchell).

"The Nader Report and the Goals and Limits of Antitrust," Public Policy, Summer 1972.

"Advertising as a Source of Monopoly," Philip M. Chen, ed., America's Changing Role in the 70's, Taiwan, 1973 (with Thomas A. Wilson).

The Role of Analysis in Regulatory Decision Making: The Case of Cable Television, Chapter 5, R.E. Park, ed., D.C. Heath and Co., 1973.

"Racial Discrimination in American Industry," Economica, November 1973.

"Research on Labor Market Discrimination," M.D. Intriligator & D. Kendrick, eds., Frontiers of Quantitative Economics II, North Holland, 1974.

"Advertising and the Distribution of Consumer Demand," S.F. Divita, ed., Advertising and the Public Interest, American Marketing Association, 1974 (with Thomas A. Wilson).

"Monopoly and the Distribution of Wealth," Quarterly Journal of Economics, May 1975 (with Robert H. Smiley).

Reprinted in F.M. Scherer, ed., Monopoly and Competition Policy, 1993.

"The Median Voter Rule and the Theory of Political Choice," Journal of Public Economics, January 1976.

"Identical Bids and Cartel Behavior," Ball Journal of Economics, Spring 1976 (with Mark A. Schankerman).

Reprinted in The Journal of Reprints of Antitrust Law and Economics, Vol. X.

"Monopoly: Who Gains--Who Loses?" Llad Phillips & H.L. Votey, eds., Economic Analysis of Pressing Social Problems, 2nd edition, Rand McNally and Co., 1977.

"Comments on Advertising and Concentration," David G. Tuerck, ed., Issues in Advertising, American Enterprise Institute, 1978.

Review of Lawrence A. Sullivan, Handbook of the Law of Antitrust, California Law Review, May 1978.

"The Effect of Advertising on Competition: A Survey," Journal of Economic Literature, June 1979 (with Thomas A. Wilson).

Reprinted in Kyle W. Bagwell, ed., The Economics of Advertising, 2001.

"Competition in the Pharmaceutical Industry," Robert I. Chien, ed., Issues in Pharmaceutical Economics, Chapter 4, Lexington Books, 1979.

"Monopoly and the Distribution of Wealth: Revisited," Quarterly Journal of Economics, February 1980 (with R.H. Smiley).

"Diagnosing Monopoly: Positive or Normative Economics," Quarterly Review of Economics and Business, Summer 1980.

"Government Regulation and Occupational Licensure: A Comment," Simon Rottenberg, ed., Occupational Licensure and Regulation, American Enterprise Institute, 1980.

"On the Economics of Advertising: A Reply to Block and Simon," Journal of Economic Literature, September 1980 (with Thomas A. Wilson).

"Conglomerate Mergers: Considerations for Public Policy," Roger D. Blair and Robert F. Lanzillotti, eds., The Conglomerate Corporation: An Antitrust Law and Economics Symposium, Oelgeschlager, Gunn, and Hain, 1981.

Reprinted in U.S. Department of Commerce, Mergers and Economic Efficiency, Vol. 1, Washington, 1980.

Statement in Robert B. Helms, ed., Drugs and Health: Economic Issues and Policy Objectives, American Enterprise Institute, 1981.

"Advertising and Its Consequences," Paul C. Hystrom and W.H. Starbuck, eds., Handbook of Organizational

Design, Vol. 2, Oxford University Press, 1981 (with R.H. Smiley and A.J. Kover).

"Health Manpower and Government Planning," Regulation, May-June 1981.

"Comments on Competition, Entry, and Antitrust," S.C. Salop, ed., Strategy, Predation, and Antitrust Analysis, Federal Trade Commission, 1981.

"The Role of the Federal Trade Commission: Comments," Proceedings of the Symposium: Changing Perspectives in Antitrust Litigation, Southwestern University Law Review, 1980-81.

"Antitrust in a Political Environment," Antitrust Bulletin, Winter 1982.

"Comments on the Future of Telecommunications Regulation," E.M. Noam, ed., Telecommunications Regulation - Today and Tomorrow, Harcourt, Brace, Jovanovich, 1983.

Review of Yale Brozen, Concentration, Mergers, and Public Policy, Journal of Economic Literature, September 1983.

"The Pharmaceutical Industry from An International Perspective," Antitrust Bulletin, Winter 1983.

"Comments on The Role of Advertising," J. M. Connor and R.W. Wood, eds., Advertising and the Food System, North Central Regional Research Publication, 1984.

"Strategic Behavior and Antitrust Analysis," American Economic Review, May 1984 (with H.E. Frech).

"The Structure and Productivity of Japanese Companies in California," Managerial and Decision Economics, June 1985 (with T. Miyao).

"The Competitive Effects of Vertical Agreements?" American Economic Review, June 1985 (with H.E. Frech).

Also published in Journal of Reprints of Antitrust Law and Economics, Vol. XX, No. 2.

"Vertical Price Fixing, Vertical Market Restraints and the New Antitrust Policy," Harvard Law Review, March 1985.

Also published in Franchise Law Review, Vol. 1, Winter 1986.

Also published in part in Terry Calvani and John Siegfried, Economic Analysis and Antitrust Law, 2nd ed., 1988.

Also published in Journal of Reprints of Antitrust Law and Economics, Vol. XX, No. 1.

Also published in Andrew I. Gavil, An Antitrust Anthology, Anderson Publishing, 1996.

"Resale Price Maintenance and Antitrust Policy," Contemporary Policy Issues, Spring 1985 (with John B. Kirkwood).

Also published in L. Pelligrini & S.K. Reddy, eds., Marketing Channels, 1986.

Review of Zvi Girliches, R&D, Patents, and Productivity, Journal of Economic Literature, June 1986.

"The Political Economy of the Pharmaceutical Industry," Journal of Economic Literature, September 1986.

"The Competitive Effects of Vertical Agreements: Reply," American Economic Review, December 1987 (with H.E. Frech).

"Vertical Arrangements and Antitrust Analysis," New York University Law Review, November 1987.

Also published in Eleanor Fox et al., The Fall and Rise of Antitrust Policy, 1992.

Review of John Coffee et al., Knights, Raiders, and Targets: The Impact of the Hostile Takeover, Journal of Economic Literature, Vol. XXVIII, March 1990.

"The Two Economics of Vertical Restraints," Review of Industrial Organization, Vol. 5, Summer 1990.

Also published as "Introduction" in Journal of Reprints of Antitrust Law and Economics, Vol. XX, No. 1, 1990.

Also published in Southwestern University Law Review, Vol. 21, 1992.

Guest Editor for The Journal of Reprints of Antitrust Law and Economics, Vol. XX, No. 1: Vertical Restraints-Part I, Federal Legal Publications, 1990.

Guest Editor for The Journal of Reprints of Antitrust Law and Economics, Vol. XX, No. 2: Vertical Restraints-Part II, Federal Legal Publications, 1990.

"United States Antitrust Policy: Issues and Institutions", chapter in William S. Comanor, et al., Competition Policy in Europe and North America: Economic Issues and Institutions, Harwood Academic Publishers, 1990.

"Conclusions for Competition Policy", chapter in William S. Comanor, et al., Competition Policy in Europe and North America: Economic Issues and Institutions, Harwood Academic Publishers, 1990.

"Industry" in The World Book Encyclopedia, 1990.

"Commentary", in F.M. Scherer and Mark Perlman, eds., Entrepreneurship, Technological Innovation and Economic Growth, University of Michigan Press, 1992.

"Market Power or Efficiency: A Review of Antitrust Standards" (with Lawrence J. White), Review of Industrial Organization, Vol. 7, No. 2, pp. 105-116, 1992.

Review of Studies in Economic Rationality: X-efficiency Examined and Extolled, K. Weiermair and Mark Perlman (eds.), Journal of Economic Literature, Vol. XXX, March, 1992.

"Competition and Regulation in the Japanese Securities Market - The Case for Creating a Japanese SEC"

(with Takahiro Miyao), Economic Directions, Vol. 4, No. 1, Summer 1992.

"The Performance of the Distribution System for Gasoline", Richard J. Gilbert, ed., The Environment of Oil, Kluwer Academic Publishers, 1993.

"Predatory Pricing and the Meaning of Intent" (with H.E. Frech), The Antitrust Bulletin, Vol. XXXVIII, No. 2, Summer 1993.

Review of Richard E. Caves, Industrial Efficiency in Six Nations, Journal of Economic Literature, Vol. XXXII, September 1994.

"Pharmaceuticals" (with Stuart O. Schweitzer), in Walter Adams and James W. Brock, eds., The Structure of American Industry, 9th edition, 1994.

"Rewriting History: The Early Sherman Act Monopolization Cases" (with F.M. Scherer), Journal of the Economics of Business, Vol. 2, 1995.

"Profitability in the Pharmaceutical Industry," in Robert B. Helms, ed., Competitive Strategies in the Pharmaceutical Industry, American Enterprise Institute, 1995.

"Competition Policy towards Vertical Foreclosure in the Global Economy," International Business Lawyer, Nov. 1995 (with Patrick Rey).

Also in Waverman, Comanor and Goto, Competition Policy in the Global Economy, Routledge Press, 1997

"The Cost of Pharmaceuticals," in R.A. Andersen et al., Changing the U.S. Health Care System, Jossey-Boss, 1996 (with Stuart O. Schweitzer).

"The Pharmaceutical Industry and the Health Needs of Developing Countries," Investing in Health Research and Development, World Health Organization, Annex 4, 1996.

"Strategic Pricing of New Pharmaceuticals" (with Z. John Lu), Review of Economics and Statistics, Vol. 80, No. 1, Feb. 1998.

"Competition Policy towards Vertical Restraints in Europe and the United States" (with Patrick Rey), Empirica, Vol. 24, Nos. 1-2, 1998.

"The Role of Pharmaceuticals in the Health Care System" (with Stuart O. Schweitzer), Stephen J. Williams and Paul R. Torrens, Introduction to Health Services, 5th edition, Delmar Publishers, 1999.

"The Pharmaceutical Research and Development Process, and its Costs," Drugs for Communicable Diseases: Stimulating Development and Securing Availability, Médecins Sans Frontiers, Paris, 1999.

"Vertical Restraints and the Market Power of Large Distributors" (with Patrick Rey), Review of Industrial Organization, Vol. 17, Sept. 2000.

"The Role of Reimbursement in Determining Pharmaceutical Development," The Ferrara Health Industry Policy Forum, November 2001.

"Pharmaceutical Prices and Expenditures" (with Stuart O. Schweitzer), in Ronald M. Andersen et al., Changing the U.S. Health Care System, 2nd edition, Jossey-Bass, 2001, Ch. 5.

"The Problem of Remedy in Monopolization Cases: the Microsoft Case as an Example," Antitrust Bulletin, Vol. XLVI, No. 1, Spring 2001.

Review of Ralph Landau et al., Pharmaceutical Innovation: Revolutionizing Human Health, Journal of Economic Literature, Vol. 39, September 2001, pp. 944-945.

"The Impact of Income and Family Structure on Delinquency" (with Llad Phillips), Journal of Applied Economics, Vol. V, No. 2, Nov. 2002.

"Geographic Market Limits for Yellow Pages Advertising in California" (with Jon M. Riddle), D.J. Slottje, ed., Measuring Market Power, North Holland, 2002, Ch. 12.

"The Costs of Regulation: Branded Open Supply and Uniform Pricing of Gasoline" (with Jon M. Riddle), H.E. Frech III, ed., Special Issue, International Journal of the Economics of Business, Vol. 10, No. 2, July 2003, pp. 135-155.

"Child Support Payments: a Review of Current Policies," in William S. Comanor, The Law and Economics of Child Support Policies, Edward Elgar Publishers, 2004.

"Family Structure and Child Support: What matters for child delinquency rates?" (with Llad Phillips), in William S. Comanor, The Law and Economics of Child Support Policies, Edward Elgar Publishers, 2004.

"Vertical Mergers and Market Foreclosure," (with Patrick Rey), in Jack Kirkwood, ed., "Antitrust Law and Economics," Research in Law and Economics, Vol. 21, 2004, pp. 445-458.

"Steiner's Two-stage Vision: Implications for Antitrust Analysis," Antitrust Bulletin, Vol. XLIX, Winter 2004, pp. 999-1012.

"A Hedonic Model of Drug Pricing," (with S.O. Schweitzer and T. Carter), in M. Tommaso and S.O. Schweitzer, eds., Health Policy and High-tech Industrial Development: Learning from Innovation in the Health Industry, Edward Elgar Publishing, 2005.

"Vertical Antitrust Policy: Getting the Balance Right," (with F.M. Scherer and Robert A. Steiner), American Antitrust Institute, 2005

"The Economics of Advertising and Steiner's Dual Stage Model," International Journal of the Economics of Business (with Thomas A. Wilson), 2006.,

"Child Visitation and Performance: the Evidence,"
Louisiana Law Review, Vol. 66, Spring 2006, pp.
763-769.

"Is the United States an Outlier in Health Care and
Health Outcomes? A Preliminary Analysis,"
International Journal of Health Care Finance and
Economics (with H.E. Frech and Richard D.
Miller), 2006.

"La politica industriale in un contesto
internazionale. Riflessioni sul ruolo delle
Nazioni Unite" (Translation: "Industrial
Politics in International Competition:
Reflections on the Role of the United Nations")
(with Daniele Paci and S.O. Schweitzer), M.R. Di
Tommaso and S. Giovannelli, eds., The United
Nations and Industrial Development, FrancoAngeli,
2006.

"The Economics of Research and Development in the
Pharmaceutical Industry," in Frank A. Sloan and
C.R. Hsieh, Pharmaceutical Innovation, Cambridge
University Press, 2007, pp. 54-72.

"Determinants of Drug Prices and Expenditures,"
Managerial and Decision Economics, (with Stuart
O. Schweitzer) Vol. 28, 2007, pp. 357-370.

"Controlling Pharmaceutical Prices and Expenditures,"
(with Stuart O. Schweitzer) in R.A. Andersen et
al., Changing the U.S. Health Care System, 3rd
ed., Jossey-Boss, 2007, Ch.7.

"Is There a Consensus on the Antitrust Treatment of
Single-Firm Conduct?" Wisconsin Law Review, Vol.
2008, No. 2, pp. 387-404.

The Next Antitrust Agenda, American Antitrust
Institute, Albert A. Foer, ed., Vandeplas
Publishing, 2008, contributor.

"The Detection of Cartels and the Blending of Law and
Economics," in Eleanor M. Fox and D. Daniel
Sokol, Competition Law and Policy in Latin
America, Hart Publishing, 2009, pp. 253-269.

"Vertical Mergers, Market Power, and the Antitrust Laws," reprinted in Jeffrey A. King, ed., Corporate Strategy, Vol. 1, Sage Library in Business and Management, 2009.

"Antitrust Policy towards Resale Price Maintenance following Leegin," Antitrust Bulletin, Vol. 55, Spring 2010, pp. 59-78.

"Prices of Pharmaceuticals in Poor Countries Are Much Lower than in Wealthy Countries," (with Stuart O. Schweitzer) Health Affairs, Vol. 30, August 2011, pp. 1553-1561.

"Promoting Pharmaceutical Access while Controlling Prices and Expenditures," (with Stuart O. Schweitzer) in G.F. Kominski et al., Changing the U.S. Health Care System, 4th ed., Jossey-Boss, 2013.

"Leegin and its Progeny: Implications for Internet Commerce," Antitrust Bulletin, Vol. 58, Spring 2013, pp. 107-127.

"Mergers and Innovation in the Pharmaceutical Industry," (with F.M. Scherer) Journal of Health Economics, Vol. 32, January 2013, pp. 106-113.

"Spending on Pharmaceuticals: How much do we pay, and what do we get for what we pay?" (with H.E. Frech) Harvard Health Policy Review, Vol. 14, Spring 2013, pp. 5-7.

Testimony and Reports

"The Prospects for Oil," 1967 (with M.J. Peck, John J. McGowan, & Nadav Safran).

Statement of Economics of Railroad Rates, submitted to Interstate Commerce Commission, Docket No. 34830, 1967.

Statement on Competitive Problems in the Drug Industry, 1968, Hearings before the Subcommittee on Monopoly, Select Committee on Small Business, United States Senate, 90th Congress, Part 5.

"The Economic Consequences of the Proposed Regulation of the CATV Industry," submitted to the Federal Communications Commission, Docket No. 18397-A, 1970 (with Bridger M. Mitchell).

Statement on Competitive Effects of Vertical Restrictions, 1972, Hearings before the Subcommittee on Antitrust and Monopoly, Committee on the Judiciary, United States Senate, 92nd Congress, 1972.

Statement on Economics of Vertical Restrictions, 1976, Hearings before Subcommittee on Monopolies and Commercial Law, Committee on the Judiciary, United States House of Representatives, July 1, 1976.

"Protectionism and Government Economic Policies in Ecuador," Catholic University of Guayaquil, in Spanish, 1976.

Statement on Conglomerate Merger Policy, 1979, Hearings before the Committee on the Judiciary, United States Senate, 96th Congress, March 8, 1979.

Statement on the Effect on Federal Energy Regulations on Competition in the Retail Market for Gasoline, 1979, Hearings before the Subcommittee on Energy Regulation, Committee on Energy and Natural Resources, United States Senate, 96th Congress, March 26, 1979.

Statement on Competition in Health Care and the Impact of Federal Tax Policy, 1979, Hearings before a Joint Session of the Oversight Subcommittee, Committee on Ways and Means, and the Tax Expenditure Task Force, Budget Committee, United States House of Representatives, 96th Congress, July 9, 1979.

Statement on Vertical Territorial Restrictions in the Soft Drink Industry, 1979, Hearings before the Subcommittee on the Judiciary, United States Senate, 96th Congress, September 26, 1979.

Statement on Antitrust Enforcement Policies Towards Vertical Restraints, Hearings before the Subcommittee on Monopolies and Commercial Law, Committee on the Judiciary, U.S. House of Representatives, February 24, 1988.

Statement on "The Two Economics of Vertical Restraints," Hearings before the Committee on the Judiciary, U.S. Senate, June 1, 1989.

Statement on the Economic and Policy Implications of Parallel Imports, Hearings before the Subcommittee on Patents, Copyrights and Trademarks, Committee on the Judiciary, U.S. Senate, April 4, 1990.

Report "Price Oscillations in Oligopoly" (with James L. Sweeney), Center for Economic Policy Research, Stanford University, January 1990.

"Commentary on the Role of Economics in Antitrust Law" (as part of the Working Group on the Role of Economics in Antitrust), The Sedona Conference, 2006.

"Brief for William S. Comanor and F.M. Scherer as *Amici Curiae* supporting neither party," *Leegin Creative Leather Products v. PSKS*, Supreme Court of the United States, 2007.

"Memorandum on the Proposed Acquisition of Pfizer by Wyeth" (with F. M. Scherer), American Antitrust Institute, February 11, 2009.

"Statement on Pharmaceutical Industry Consolidation" (with F. M. Scherer) American Antitrust Institute, April 7, 2009.

"Comments Submitted to the Federal Trade Commission on the Pfizer-Wyeth and Merck-Schering Plough Mergers" (with F. M. Scherer), November 17, 2009.

"Brief *Amici Curiae* of Antitrust Scholars in support of Respondents," *American Express Co. v. Italian Colors Restaurant, et al.*, Supreme Court of the United States, 2013.

Newspaper/Blog Columns and Letters

Column, Los Angeles Times, May 8, 1983.

Letter, Wall Street Journal, October 25, 1985.

Letter, Wall Street Journal, January 13, 1989.

Column, Los Angeles Times, March 18, 1992.

Column, Los Angeles Times, December 30, 1992.

Column, San Francisco Chronicle, July 7, 1993.

Column, Philadelphia Inquirer, September 13, 1993.

Column, Santa Barbara News-Press, December 9, 1993.

Column, Los Angeles Times, May 18, 1994.

Letter, Wall Street Journal, September 9, 1997.

Letter, Wall Street Journal, March 10, 1998.

Column, Los Angeles Times, February 22, 1999.

Letter, Los Angeles Times, March 30, 1999.

Column, San Francisco Chronicle, July 15, 1999.

Letter, Los Angeles Times, September 26, 1999.

Letter, Los Angeles Times, April 11, 2000.

Letter, Los Angeles Times, November 26, 2000.

Letter, Los Angeles Times, June 4, 2001.

Letter, Los Angeles Times, December 12, 2006.

Letter, Los Angeles Times, March 30, 2007.

Letter, The Economist, August 8, 2009.

Letter, Philadelphia Inquirer, September 2009.

Letter, Wall Street Journal, February 11, 2011.

Column, Asia Times, March 27, 2012.

Column, Elgar-blog, September 25, 2012.

Column, Asia Times, April 4, 2013.

APPENDIX B

**CASES AT WHICH TESTIMONY WAS
PROVIDED SINCE JANUARY 1, 2009**

William S. Comanor

Wyeth v. Apotex, Inc., and Apotex Corp., U.S. District Court for the Southern District of Florida; testimony at trial and by deposition.

McDonough, et al. v. Toys R Us Inc. d/b/a Babies R Us, et al., U.S. District Court for the Eastern District of Pennsylvania; testimony at hearing and by deposition.

Commonwealth of Pennsylvania v. TAP Pharmaceutical Products, Inc., et al., Commonwealth Court of Pennsylvania, testimony at trial.

In re TFT-LCD (Flat Panel) Antitrust Litigation, U.S. District Court for the Northern District of California, testimony by deposition.

Rx.com and Joe S. Rosson v. John M. O'Quinn & Associates et al., District Court of Harris County, Texas, testimony at trial.